

OCCUPATIONAL INFECTIONS

1852

(No. 3 October 1992)

Occupational infections are those human diseases caused by work-associated exposure to microorganisms such as bacteria, viruses, fungi, and parasites. During the performance of their jobs many CAL FIRE employees are at risk of contracting infectious diseases. In an emergency setting, CAL FIRE employees are frequently unaware of the infectious disease status of persons they come in contact with during the performance of their duties. The purpose of this section is to establish procedures that minimize the risk of contracting and/or spreading communicable diseases and thus to protect CAL FIRE personnel.

Supervisors must ensure that safe work practices are observed, that protective equipment is used and appropriate post-exposure management is implemented. Appropriate personnel will be given instruction in work practices to prevent exposure to occupational infectious diseases as an integral part of the training given for any job tasks that may result in such exposures. See Training Procedures Handbook [Section 4035](#), Individual Training Programs, and [Section 4043](#), Training Curriculum.

BASIC INFECTIOUS DISEASE TRAINING

1852.1

(No. 41 January 2003)

Each unit is responsible for primary and continuing basic infectious disease training of all personnel who are required to perform tasks which involve possible exposure to infectious diseases. All emergency response personnel who provide emergency medical treatment or who are otherwise exposed to blood or other potentially infectious material (OPIM) must receive basic infectious disease training at the time of hire or initial assignment to tasks where occupational exposure may occur, and annually thereafter. The training must include:

- An accessible copy of the regulatory text of the Cal/OSHA Bloodborne Pathogen Standards, [California Code of Regulations, Title 8](#) (CCRT8) Section 5193, and an explanation of its contents.
- Epidemiology and Symptoms
- Modes of Transmissions
- CAL FIRE's Exposure Control Plan
- Risk Identification
- Methods of Compliance
- Decontamination and Disposal
- PPE
- Hepatitis B Vaccination
- Post-Exposure Evaluation and Follow-up (Ryan White Policy)
- Signs and Labels
- Questions and Answer Opportunities

INFECTIOUS DISEASE REFRESHER TRAINING

1852.1.1

(No. 3 October 1992)

A refresher course in basic occupational infectious disease shall be repeated annually.

INFECTIOUS DISEASE TRAINERS

1852.1.2

(No. 41 January 2003)

Each unit will have enough certified trainers to meet their needs in carrying out this policy. Unit training officers will keep a list of qualified trainers.

DOCUMENTATION OF INFECTIOUS DISEASE TRAINING

1852.1.3

(No. 41 January 2003)

Training records shall be maintained according to CAL FIRE policy and include an Employee Training Sign-up Sheet ([IIPP-6](#)) and, in addition, an individual Training Record (ITR). The use of the Train Traker 2 is acceptable.

INFECTIOUS DISEASE PROGRAM RESOURCES

1852.1.4

(No. 41 January 2003)

The following materials are available in each unit and shall be used as additional sources of information on occupational infections:

Occupational Exposure to Bloodborne Pathogens: Precautions for Emergency Responders

U.S. Department of Labor

OSHA 3130

1992

Guide to Developing and Managing an Emergency Service: Infection Control Program

U.S. Fire Administration

1992

American Red Cross

Sacramento Chapter

PO Box 160167

Sacramento, CA 95816

(916) 368-3137

Cal/OSHA Bloodborne Publication

2211 Park Towne Circle, Suite 4

Sacramento, CA 95825

(916) 574-2528

DISEASE TRANSMISSION

1852.2

(No. 41 January 2003)

In an effort to prevent exposures to infectious diseases, it is important that employees understand the basic elements that constitute an exposure. Employees must be able to identify the risk factors encompassed in the infectious process and the method of preventing or reducing these factors. The Determination Matrix and Reporting Procedure ([IIPP-10](#)) shall be used by employees, and/or supervisors in determining if a reportable exposure has occurred and the appropriate reporting procedures are implemented.

Exposure occurs when an employee is in contact with a fluid or substance capable of transmitting an infectious agent in a manner that may have a harmful effect. An occupational exposure is an exposure that occurs during the course of the employee's duties. An infection is a state in which the body is invaded by a disease-causing organism, which has multiplied and produces harmful effects. An exposure to a disease does not constitute an "infection". While it is true that all infections result from an exposure, most exposures do not result in an infection.

A potential exposure exists when two factors are present:

1. The person has come in contact with a body fluid or substance that is infectious.
2. The fluid or substance was able to enter the person's body through a specific portal of entry.

[Section 1853](#), the supplement "An Overview of Infectious Disease," details the chain and method of transmission for specific infectious diseases encountered by emergency responders. This supplement can be used as a reference. It addresses occupational diseases such as: chicken pox, the common cold, influenza, cytomegalovirus (CMV), gonorrhea, measles (rubella), measles (rubeola), meningitis, tuberculosis, lice, scabies, herpes simplex, hepatitis A and hepatitis B, HIV/AIDS, impetigo, Lyme disease, mumps, pertussis, rabies, salmonellosis, and syphilis.

PRUDENT HEALTH PRACTICES

1852.3

(No. 3 October 1992)

General good health is the employee's best defense against disease. Good nutrition helps the body ward off infectious diseases and prevent some chronic and/or fatal diseases ([see Section 1844, Nutrition](#)). Stress reduction, a routine exercise program and adequate rest ([see Section 1845, Rest](#)) are also vital factors of good health. Regular physical exams and current immunizations are essential to health enhancement and disease prevention.

DISEASE PREVENTIVE MEASURES

1852.4

(No. 3 October 1992)

All CAL FIRE emergency response personnel must use work practices and protective equipment that reduce the risk of injury and exposure to themselves and to others. CAL FIRE employees provide emergency medical care in a relatively uncontrolled environment and exposures are unpredictable. Therefore, all patients shall be considered infected. [See exhibit](#) for guidelines on the use of personal protective equipment.

UNIVERSAL PRECAUTIONS

1852.4.1

(No. 41 January 2003)

Although universal precautions were originated for application to blood and body fluids containing blood, they shall be used for all body fluids and substances capable of transmitting infectious disease.

Universal precautions serve as control measures that are simple and uniform and can be carried out in extremely variable conditions. Universal precautions shall be used consistently with all persons. Universal precautions include the following:

1. Gloves shall be worn for any patient contact and shall be changed after each contact. Masks and protective eye wear, gowns, or aprons shall be worn if exposure to body fluids or substances is anticipated. The need for specific types of protective equipment can often be estimated with the first dispatch, but is more accurately made during the initial head-to-toe survey in the field.
2. Hand and skin surfaces shall be thoroughly washed as soon as possible after each patient contact. If gloves are heavily soiled with blood, wash the gloves off before removing. Hands shall always be washed after gloves are removed. If there is no running water in the field, antiseptic wipes must be used until facilities for better hand washing techniques are available. [See Section 1846.1](#), Hand Washing and [Section 1854](#), Work Practices for Emergency Response Personnel, for descriptions of proper hand washing techniques.
3. Employees shall take precautions to prevent injuries caused by needles and other sharp instruments. Needles shall not be recapped, bent or broken by hand. After use, needles shall be disposed of in puncture-resistant containers.
4. Pocket masks or other ventilation devices shall be available for use in resuscitation to reduce the risk of exposure to other diseases which are transmitted by respiratory secretions.

5. Facial protection shall be worn whenever there is a chance of body fluids spraying or splashing in the rescuer's eyes, nose or mouth. Masks, in conjunction with eye protection, such as goggles and safety glasses with solid side protection, or chin length face shields are considered appropriate. A particle mask shall be worn by the rescuer and/or the patient when it does not cause an increase in difficulty breathing. This precaution shall also be taken when dealing with a patient in a confined space when the patient is vomiting, spitting or coughing excessively. However, it should never take priority over the patient's oxygenation needs.
6. Open cuts and sores, abrasions or dermatitis shall be covered with adhesive bandages that repel water unless there is medical advice to the contrary. If the area cannot be covered, employees should refrain from direct patient contact until the condition is resolved. All bandages shall be changed when they get wet.

See [Section 1852.6](#), Decontamination Procedures, for information on disinfection, decontamination and disposal precautions. See [Section 1854](#), Work Practices for Emergency Response Personnel, for more information on specific work practices for various types of emergency response personnel.

IMMUNIZATIONS

1852.4.2

(No. 3 October 1992)

Emergency response personnel are at increased risk for exposure to and possible transmission of vaccine-preventable diseases. Immunizations can give passive or active immunity to several contagious diseases that are potential health hazards to emergency personnel. Many persons will have natural immunity to certain diseases, such as chicken pox. Emergency response personnel shall consult with their personal health care provider to guarantee that their MMR (measles, mumps, and rubella) and TD (tetanus-diphtheria) immunizations are current.

The U.S. Department of Health and Human Services, Centers for Disease Control, recommends that emergency response personnel consider the influenza vaccination and have a low dose tuberculin skin test of Purified Protein Derivative (PPD) on a regular basis. See [Section 1853](#), An Overview of Infectious Disease, for further explanation concerning disease-specific immunizations. [See Section 1852.4.3](#) regarding hepatitis B immunizations.

HEPATITIS B

1852.4.3

(No. 49 December 2003)

Each unit must provide an appropriate hepatitis B immunization series for its emergency response personnel. This includes all personnel who are required to be trained in first aid and cardiopulmonary resuscitation, pursuant to Health and Safety Code Sections 1797.182 or 1797.83, or Section 13518 of the California Penal Code. (See Training Procedures Handbook [Section 4037.3](#), Individual Training Programs, for an appropriate listing by classification.)

Employee participation in the hepatitis B immunization program is voluntary.

Any employee declining the hepatitis B vaccination must sign a Hepatitis B Vaccine Declination. Retain the declination form in the employee's medical file (see [Section 1826](#)).

The hepatitis B immunization is a series of three intramuscular injections, given in the deltoid muscle. No other injection sites or methods are acceptable. Antibody titer shall be checked 6-8 weeks after the third vaccination to confirm that there was an adequate immune response. All medical records of the shots and titer shall be retained in the employee's medical file. ([See Section 1826](#)).

Each employee shall check with their unit concerning that unit's specific hepatitis B immunization program. Units will work with county hospitals, public clinics or cooperating agencies to provide the immunizations at the lowest cost possible. If cost effective and approved by the Unit Chief, employees may select a physician and be reimbursed for the cost of the immunization, not to exceed \$300.00 for the three shot series, and the antibody titer. Employees selecting a more expensive physician will be responsible for paying the difference themselves. An employee who receives health care benefits may be able to obtain less expensive immunizations from their personal physician and they may be required to do so.

Seasonal employees who do not complete their series of three shots prior to being laid-off at the end of the declared fire season can continue with the Hepatitis immunization program when they return the following season. Each seasonal employee shall check with their specific Unit's immunization program and reimbursement cost procedure, if applicable. It is important for the seasonal employee to keep track of where they received their initial shot(s) and which shot(s) are required to complete the full immunization series. The CAL FIRE Medical Consultant is available to provide guidance regarding the timing and dosing of the vaccine based on individual employee circumstances and previous vaccine doses [(916) 445-8164]. Units may need to coordinate the subsequent shot(s) and titer test if a seasonal employee works in a new Unit.

Hepatitis B vaccination, followed by documentation of positive antibody titer post vaccination confers lifelong immunity to hepatitis B, per Center for Disease Control

recommendations. If there was an adequate antibody titer post vaccination, the health care worker/emergency responder is not at risk for occupational acquired hepatitis B infection.

Each unit must distribute the brochure "Hepatitis B" to all appropriate personnel upon hire. These brochures are available from the Sacramento Warehouse. Employees may wish to read more about hepatitis in [Section 1853](#), An Overview of Infectious Disease for additional information concerning the hepatitis B immunization prior to deciding whether they wish to participate in the voluntary program.

COMMUNICABLE DISEASE EXPOSURE REPORTING **1852.5** (No. 41 January 2003)

POLICY

The provisions of Section 411 of the Ryan White Act (Federal Register Vol. 59, No. 54) mandate that every employer of emergency response employees provide a means of notifying employees who have sustained an exposure to bloodborne or airborne pathogens. To protect the health of its employees, CAL FIRE will provide **ALL** employees with prevention and support services that meet or exceed the requirements of the Ryan White Act.

Departmental employees are to follow the procedures contained within this section. Schedule C employees are to follow their local county Ryan White procedures.

Note: Prompt reporting and activation of this procedure is essential because, in a case where Human Immunodeficiency Virus (HIV) exposure is highly likely, suspected, or confirmed, post-exposure treatment may be recommended, and it should be started as soon as possible - preferably within one or two hours after the exposure occurs.

GENERAL

The 1994 Federal Ryan White Act requires the Department to:

- List the potentially life-threatening infectious diseases to which our employees may be exposed.
- Designate one employee as the Department's Designated Officer.
- Provide guidelines for employees to request a determination whether they were exposed to an airborne, bloodborne, or other infectious disease.
- Provide guidelines for prompt responses to employee requests and medical facility notification.

- Provide a confidential medical evaluation and follow-up, including counseling, following a report of an exposure.

POTENTIALLY LIFE-THREATENING INFECTIOUS DISEASES

This list includes those diseases that are potentially life threatening, i.e., it carries a significant risk of death if acquired by a healthy, susceptible host and the disease can be transmitted from person to person.

- **Airborne Diseases**

Occupational exposure to airborne pathogens, such as pulmonary tuberculosis, may occur when an employee shares air space with a patient who has an infectious disease caused by an airborne pathogen.

- **Bloodborne Diseases**

Contact with blood or other body fluids during the performance of normal job duties is considered potentially hazardous. An exposure incident is defined as a specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or other potentially infectious materials. Examples are:

Hepatitis B
Hepatitis C
HIV infection

- **Uncommon or Rare Diseases**

While person-to-person transmission is rare, these diseases can be life threatening. Examples are:

Diphtheria
Meningitis
Plague
Hemorrhagic fever
Rabies

IMPLEMENTING RYAN WHITE ACT PROCEDURES

CAL FIRE has established a notification system that will provide support to an employee who is exposed (or believes that he/she is exposed) to an airborne or bloodborne pathogen. The local CAL FIRE Emergency Command Center (ECC) will report all communicable disease exposures to the Designated Officer (D. O.). The local ECC shall follow Procedures No. [800](#) and [803](#) in the 8100 Command and Control Handbook.

DESIGNATED OFFICER (D.O.)

The CAL FIRE Medical Consultant is the D.O. The pager number for the D.O. is (916) 816-6372. If unable to make contact in ten minutes, the report must be made to the Sacramento Headquarters Fire Protection Duty Chief at (916) 327-3063. The Duty Chief will attempt to contact the D. O. at specified unlisted phone number(s).

UNIT RYAN WHITE LIAISON (R.W.L.)

Employees must be provided with support for communicable disease exposures 24 hours a day, seven days a week. To meet this requirement, each Unit shall appoint individuals to perform the duties of the R.W.L. Each Unit shall provide and maintain a list of the current R.W.L.s to the Department Health and Fitness Unit Manager and the D.O.

REPORT INITIATED BY CAL FIRE EMPLOYEE

When an employee sustains an exposure to a communicable disease, he/she will initiate the communicable disease notification system.

The employee will:

- Immediately initiate decontamination procedures.
- Report the exposure to his/her supervisor or, if necessary, the Unit ECC.
- If on an incident, report to the Incident Commander, Agency Representative, Medical Unit Leader, Comp/Claims Officer, or other CAL FIRE supervisor.
- Report to and receive direction from the D.O. and/or the R.W.L. (if the D.O. cannot be contacted within ten minutes).
- Comply with the testing and treatment regimen and all follow-up visits as advised by the D.O.

The Supervisor (or, if on an incident, the Incident Commander, Agency Representative, Medical Unit Leader, Comp/Claims Officer, or other CAL FIRE supervisor per CAL FIRE Health and Safety Handbook, [Section 1713](#)) will:

- Ensure the employee receives medical attention per policy.
- Notify the R.W.L. and the Unit ECC with jurisdiction.
- Complete necessary documentation. (See Health and Safety Handbook Section [1713.2](#), Block 51B).

The Unit ECC staff with jurisdiction will:

- Receive exposure information from the supervisor or the employee.
- Initiate Procedure No. 803.
- Confirm that the employee has a telephone or radio readily available to him/her.
- Notify the on-call R.W.L.
- Assist the employee in establishing contact with the D.O. or the R.W.L.

The R.W.L. will:

- Confirm the location of the medical facility and confirm the phone number(s) for the employee and medical facility physician.
- Establish communication between the employee and the D.O.
- Arrange for the employee to be transported to the medical facility.

The R.W.L. will provide the D.O. with the following information:

- Name of the employee.
- Information related to the potential exposure.
- Phone number where the employee can be reached.
- Medical facility phone number.

The D.O. will:

- Contact both the employee and, if necessary, the medical facility. Collect and assess the information related to the exposure. Provide the employee with the D.O.'s phone number and pager number.
- Determine if an exposure has occurred.
- Give direction to the employee.
- Act as the liaison between the employee and the health care professional that is providing the assessment and medical intervention to the employee.

- Determine if assessment and interventions are appropriate.
- Complete all documentation and mail all required correspondence.
- Provide post-exposure consultation to the employee.
- Delegate medical case management responsibility to CAL FIRE Nurse Practitioners if clinically indicated.

EXPOSURE REPORT INITIATED BY THE RECEIVING MEDICAL FACILITY

In the event a medical facility discovers that a source case was treated and/or transported to their emergency department by an employee, the medical facility is required by the Ryan White Act to notify the Department. The medical facility will contact the D.O. The D.O. will contact the Unit ECC staff with jurisdiction. The D.O. will collect and assess the information related to the exposure.

The Unit ECC staff with jurisdiction will:

- Initiate [Procedure No. 803](#).
- Notify the on-call R.W.L. and the employee's on-call supervisor.
- Confirm that the employee has a telephone or radio available to him/her.
- Assist the employee in establishing contact with the D.O. and the R.W.L.

The R.W.L. will:

- Confirm the location of the medical facility and confirm the phone number(s) for the employee and medical facility physician.
- Establish communication between the employee and the D.O.
- Arrange for the employee to be transported to the medical facility, as needed.

The R.W.L. will contact the D.O. and confirm the following information:

- Name of the employee.
- Information related to the potential exposure.

- Phone number where the employee can be reached.
- Medical facility phone number.

The D.O. will:

- Contact both the employee and assess the information related to the exposure.
- Provide direction to the employee.
- Determine if assessment and interventions are appropriate.
- Complete all documentation and mail all required correspondence.
- Provide post-exposure consultation to the employee.
- Delegate medical case management responsibility to CAL FIRE Nurse Practitioners if clinically indicated.

The employee will:

- Discuss the circumstances surrounding the exposure with the D.O.
- Report to the medical facility physician or communicable disease specialist as advised by the D.O.
- Comply with the testing and treatment regimen and all follow-up visits.
- Maintain communication and work with the D.O.

IMMEDIATE POST-EXPOSURE ACTIVITY

1852.5.1

(No. 3 October 1992)

Post-exposure procedures must include immediate hand washing ([see Section 1846.1](#)) and cleansing of any other contaminated skin areas. Contaminated clothing shall be removed, bagged and cleaned as soon as possible (see Work Practices for Emergency Response Personnel, [Section 1854](#)).

Appropriate first aid measures must be initiated.

SECONDARY POST-EXPOSURE ACTIVITY

1852.5.2

(No. 41 January 2003)

Secondary post-exposure procedures must include reporting the exposure and seeking appropriate medical attention. The R.W.L. should be familiar with local resources and litigation that affect implementation of secondary post-exposure management.

- The Form CAL FIRE 3067 must be used to document any exposure ([see Sections 1712 and 1713](#)), Accident Injury/Illness Reporting). The means of transmission, the portal of entry, and enough information about the incident so that a determination of risk can be made must be recorded on Form 3067. Any other type of exposure record that is required locally shall be completed and delivered to the appropriate persons or institution.
- [Health and Safety Code Section 1797.188](#) provides that pre-hospital personnel, defined as any of the following: EMT I, EMT II, and EMT Paramedic, Firefighter/or Peace Officer, can notify the ambulance crew or health facility to whom they release the patient that the emergency response personnel have been exposed to blood or other body fluids of the patient. Upon determining that the patient's diagnosis is a "reportable disease or condition", the health care facility must report the name and telephone number of the "exposed" employee to the county health officer.
- The county health officer is responsible for the immediate notification of the "exposed" employee if the disease is one that can be transmitted through oral contact, or blood or other body fluids. The health officer is not allowed to disclose the name of the patient or any other identifying characteristics.
- Employees who believe that they have been exposed to blood, body fluid or any infectious disease must also report the incident to their immediate supervisor, the IC or the R.W.L., or his/her designee, with as much detail as possible. The IC or immediate supervisor must then report the exposure to the R.W.L. The R.W.L. is responsible for evaluating the exposure ([see Section 1852.2](#)) and implementing the immediate and post-exposure management. The R.W.L. will contact the receiving facility (e.g., hospital or morgue) where the patient was taken and make sure they have the appropriate names and all the details of the incident.
- Post-exposure medical treatment must be determined by the health care provider that evaluates and treats the exposed employee. All medical information must be kept strictly confidential.

- The R.W.L. must provide information to the exposed employee regarding anonymous testing for HIV/AIDS. The anonymous testing and counseling is available to exposed employees at no cost to them or the department. Baseline HIV testing shall be done within seven days of exposure. Follow up testing is done at three months, six months and again at one year. The numbers to call for local alternative test sites are:

1-800-367-2437 for Northern California
 1-800-922-2437 for Southern California
 1-800-922-7234 for Southern California (Spanish)

The State Department of Health Services, Office of AIDS, maintains a list of test site locations. Units must identify local HIV test sites where confidential testing can be obtained at no cost.

- The employee shall also be assisted in seeking appropriate counseling regarding the risk of infection not only to the exposed individual, but to their family and coworkers. Medical evaluation and consultation regarding prophylactic treatment will also be made available, pursuant to [Health and Safety Code 1797.186](#). Debriefing, counseling and continued infectious disease education may be necessary factors in reducing anxiety and guaranteeing continuity of infectious disease control practice in the workplace.

DECONTAMINATION PROCEDURES

1852.6

(No. 3 October 1992)

Disinfection, decontamination and disposal precautions are listed in Work Practices for Emergency Response Personnel, [Section 1854, Work Practices for Emergency Response Personnel](#), and exhibit [Methods of Disinfection/Sterilization](#) shall be followed when dealing with any potential body fluid contamination.

CLEANING OF EQUIPMENT AND SUPPLIES

1852.6.1

(No. 3 October 1992)

Items such as non-disposable first aid equipment and ventilation devices, protective clothing and equipment shall be disinfected according to manufacturer's instructions. Recommended methods for equipment used in pre-hospital health care settings are listed the exhibit [Methods of Disinfection/Sterilization](#).

Gloves and other necessary protective clothing (e.g., goggles, gowns) will be worn while cleaning equipment and supplies. Items used in cleaning shall be considered contaminated. All first aid equipment will be cleaned in a designated "dirty" sink and never cleaned in the kitchen or bathroom sinks. Each unit must check with the local health department for any special considerations regarding cleaning and disposal.

CLEANING AND DECONTAMINATING BLOOD OR OTHER BODY FLUIDS

1852.6.2

(No. 41 January 2003)

All blood spills, blood-contaminated fluids, or OPIM shall be promptly cleaned up using an EPA-approved germicide or a 1:100 solution of household bleach in the following manner while wearing gloves. Bleach solution can be made up by adding 1/4 cup bleach to 1 gallon of tap water. A fresh solution shall be made every 24 hours since its concentration decreases rapidly.

When using a cleaning solution, chemicals, or any other substance which can cause corrosion, severe irritation, or permanent tissue damage, or which is toxic by absorption, a plumbed or self-contained eyewash or eye/facewash equipment shall be provided in all work areas. Employees must be able to access these units within 10 seconds. (See [CCRT8, Section 5162](#)).

RECORDKEEPING

1852.7

(No. 41 January 2003)

All Sharps Injuries will be logged, updated and maintained by CAL FIRE's Ryan White Designated Officer, on CAL FIRE's Sharp Injury Log ([IIPP 10b](#)). This log is a confidential document.

All Administrative Units are encouraged to maintain a similar log, without referencing any employee by name. This log would be utilized to determine trends and causes dealing with Sharps, with the intent of reviewing work practice controls.

For medical records, exposure reports, hepatitis B Declination Form, accessibility to medical records and/or exposure reports, and the transfer of records refer to [Section 1826](#).

[\(see next section\)](#)

[\(see HB Table of Contents\)](#)

[\(see Forms or Forms Samples\)](#)